

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

**MEMORANDUM**

**December 4, 2017**

**TO:** *PF* Phillip Fielder, P.E., Permits and Engineering Group Manager

**THROUGH:** *gm* Phil Martin, P.E., Engineering Manager, Existing Source Permits Section

**THROUGH:** *HA* Amalia Talty, P.E., Existing Source Permits Section

**FROM:** *SA* Sharon Alder, E.I., New Source Permits Section

**SUBJECT:** Evaluation of Permit Application No. **2015-1373-C (M-1) PSD**  
Oklahoma Gas & Electric Company  
McClain Generating Station (SIC 4911/NAICS 221112)  
Facility ID: 3694  
Section 35, Township 10N, Range 4W, McClain County  
Latitude: 34.9705°N; Longitude: 96.7335°W  
Directions: From Newcastle, go east on HW 37 to I-44. Proceed under I-44  
and turn north to SW 175<sup>th</sup> Street. Go east on SW 175<sup>th</sup> about ¼ mile to site.

**SECTION I. INTRODUCTION**

Oklahoma Gas & Electric Company (OG&E) has requested a modification to Permit No. 99-213-C PSD issued January 19, 2000, to authorize emissions associated with Startup, Shutdown, and Maintenance (MSS) events. OG&E is requesting alternative, short-term emission limits for MSS events associated with operation of the combustion turbines (CT) located at the McClain Generating Station. The CTs are designed to operate in the dry low NOx (DLN) mode at loads from approximately 50% up to base load rating. Operation at lower loads occurs during startup and shutdown. During MSS the DLN system must cycle through four stages to safely bring the burner online in its final low NOx configuration or to shut down. At startup the mixture of air and gas is adjusted to increase the fuel to air ratio to maintain combustion to prevent flameout. The fuel rich mixture results in elevated NOx levels due to higher flame temperatures. The turbines can take up to four (4) hours to reach normal operation parameters. Once the burner is online and combustion stability is established the NOx emissions meet the normal BACT limit. OG&E will utilize the currently installed continuous emissions monitoring system (CEMS) to monitor emissions associated with MSS events.

## SECTION II. FACILITY DESCRIPTION

The facility includes two 182.5 MW natural gas-fired CTs operating in combined-cycle mode with two heat recovery steam generators (HRSGs) and a common steam turbine. The HRSGs are of unfired, natural circulation, three-pressure reheat design. The two CT generators are each equipped with dry low NO<sub>x</sub> burners for control of emissions of NO<sub>x</sub>. The CTs are fueled exclusively with pipeline natural gas. Each HRSG produces high-pressure steam at approximately 1,800 psig for introduction into a steam turbine. The steam turbine drives an additional generator with an output of about 180 MW.

The combined-cycle combustion turbine power plant consists of six point sources: two turbine unit stacks, an auxiliary boiler stack, an emergency 400-hp fire-water pump engine stack, a 438-hp emergency generator, and a cooling tower. In addition, the facility includes two 500-gallon diesel storage tanks.

The facility also includes a 20-kW Generac Model QT025A generator powered by a 40-hp 2.4-L propane-fired spark-ignition engine. The engine driver is certified by the manufacturer to meet the requirements of New Source Performance Standards (NSPS), Subpart JJJJ. The engine is EU 4-3. The facility installed it to provide emergency power to a radio tower placed at the plant in support of OG&E's Smart Grid Program. The generator will be limited to 100 hours per calendar year for maintenance and readiness testing and unlimited use for emergencies.

Since the facility exceeded the 100 TPY threshold for NO<sub>x</sub>, CO, and PM<sub>10</sub>, the initial construction was subject to full Prevention of Significant Deterioration (PSD) review and Tier III public review.

The facility constructed under Permit No. 99-213-C PSD issued January 19, 2000. The full PSD review from Permit No. 99-213-TV consisted of the following:

- Determination of best available control technology (BACT)
- Evaluation of existing air quality and determination of monitoring requirements
- Analysis of compliance with National Ambient Air Quality Standards (NAAQS)
- Evaluation of source-related impacts on growth, soils, vegetation, and visibility
- Evaluation of Class I area impact

A top-down BACT analysis consists of the following 5-step process:

- Step 1. – Identify all control technologies
- Step 2. – Eliminate technically infeasible options
- Step 3. – Rank remaining control technologies by control effectiveness
- Step 4. – Evaluate most effective controls and document results
- Step 5. – Select BACT

This BACT determination resulted in NO<sub>x</sub> emission limits of 9 ppm<sub>dv</sub> based on an annual average, corrected to 15% oxygen.

This permit modification will authorize increasing the lb/hr NO<sub>x</sub> limit from the normal operations limit of 83 lb/hr, 3-hour rolling average, to a limit of 195 lb/hr, 3-hour rolling average, during periods of startup with a maximum period of four (4) hours allowed for startup. This permit modification will not affect the permitted NO<sub>x</sub> limits for TPY, ppmvd, or lb/MMBtu. This permit modification will also authorize extended startups, which are defined as startups immediately following major maintenance events on the turbines. The NO<sub>x</sub> limit for extended startups will also be 195 lb/hr, 3-hour rolling average, for a maximum period of fourteen (14) hours.

### SECTION III. EQUIPMENT

#### Facility-Wide Equipment

EU ID#	Point ID#	EU Name/Model	Construction Date
1	HRSG-1	Combustion Turbine No. 1/General Electric 7FA	1999
2	HRSG-2	Combustion Turbine No. 2/General Electric 7FA	1999
3	FWP-1	400-hp Fire Water Pump Engine Caterpillar 3208 s/n 03Z17562	2000
4	B-1	Auxiliary Boiler	1999
4-2	4-2	438-hp Emergency Generator Caterpillar 3406 s/n 1LS01263	2000
4-3	4-3	40-hp Generac QT025A Emergency Generator w/2.4-L Engine s/n 6216669	2010
5	CTV1	Cooling Tower	1999

### SECTION IV. EMISSIONS

#### Emissions and Limits

##### Maintenance / Startup / Shutdown Limits

OG&E has proposed additional limits for two MSS type events. A limitation of 4 hours for regular startups and 14 hours for extended startups associated with major maintenance events. The determination of NO<sub>x</sub> emissions at 195 lb/hr is based on a maximum 3-hour rolling average of 194 lb/hr that occurred during a startup of Unit 1 in March 2008. After further review of available emissions data, typical emissions occurring during a shutdown do not exceed the normal operation limit established for NO<sub>x</sub> at 83 lb/hr, 3-hour rolling average. Therefore, a new NO<sub>x</sub> limit for shutdown is not proposed. Additionally, warm and/or cold startups fit within the proposed startup emission limit for NO<sub>x</sub> of 195 lb/hr, 3-hour rolling average, for a maximum duration of 4 hours.

Higher NO<sub>x</sub> emissions were requested for the 14 hours following a major maintenance activity. OG&E has determined that during a major maintenance activity, such as "green rotor run-in", the manufacturer-required testing is estimated to be 6 to 14 hours to prove the reliability of the unit before returning it to service. OG&E has requested 14 hours due to the uncertainty of passing the

initial test runs. This type of maintenance activity occurs routinely every 144,000 hours (approximately 15 years) or if the unit has been unexpectedly damaged.

### Short-Term Limits

Turbine emissions are based on manufacturer's data. Short-term emissions, lb/hr, were reviewed at five ambient temperatures, including the historical low and high temperatures, and at 50%, 75%, and 100% load. SO<sub>2</sub> emissions are conservatively based on 100% conversion of H<sub>2</sub>S to SO<sub>2</sub> and a maximum of 0.02 grains/SCF (32 ppm) H<sub>2</sub>S concentration. Maximum short term emissions were determined to be highest at the historical low temperature of -8° F and 100% load. At these conditions the turbines heat input rate of 1,683.3 MMBtu/hr results in NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, and PM<sub>10</sub> emission rates of 0.049 lb/MMBtu, 0.04 lb/MMBtu, 0.002 lb/MMBtu, 0.006 lb/MMBtu, and 0.01 lb/MMBtu, respectively.

### Long-Term Limits

Although the plant will not continuously operate at a 100% capacity factor, nominal long term emissions for the turbines are based on an average ambient temperature of 60° F and 100% load since this results in the highest emissions from manufacturer's guaranteed data and on a continuous operating period. At these conditions, PM<sub>10</sub> emissions were based on an equivalent fuel ash content of 0.075 grains/SCF. SO<sub>2</sub> emissions are conservatively based on 100% conversion of H<sub>2</sub>S to SO<sub>2</sub> and a maximum of 0.02 grain/SCF (32 ppmv) H<sub>2</sub>S concentration in the fuel. NO<sub>x</sub>, CO, and VOC emissions are based on 9 ppmvd at 15% O<sub>2</sub>, 20 ppmvd, and 1.4 ppmvw, respectively. Lead emissions are based on AP-42 (5/98, Draft), Table 3.1-4 with sulfuric acid mist emissions based on AP-42 (9/98), Section 1.3.3.2 with 3% annually converted to sulfuric acid mist.

The 22-MMBtu/hr auxiliary gas-fired boiler emissions are based on manufacturer's data of 0.036 lb/MMBtu NO<sub>x</sub>, 0.036 lb/MMBtu CO, 0.018 lb/MMBtu VOC, 0.001 lb/MMBtu SO<sub>2</sub>, and 0.009 lb/MMBtu PM<sub>10</sub> and operating 7,000 hours annually. Emissions for the diesel-fired emergency fire-water pump engine are based on the design rating of 400-hp, a maximum of 500 hrs/yr, and AP-42 (10/96), Section 3.3 emission factors.

The following table shows emissions for the two (2) emergency generators (4-2 and 4-3) based on 500 hours of operation per year and manufacturer's data.

**Emergency Engine Emissions**

Pollutant	Emission Factor (g/hp-hr)	Emissions	
		lb/hr	TPY
Emergency Generator Caterpillar 3406 (438 hp)			
NO <sub>x</sub>	14.00	13.519	3.380
CO	3.00	2.897	0.724
VOC	---	1.393	0.348
Generac QT025A Emergency Generator w/2.4-L Engine (40-hp)			
NO <sub>x</sub>	7.66	0.675	0.169
CO	42.12	3.714	0.929
VOC	0.90	0.079	0.020

Fugitive emissions at the facility are insignificant.

Cooling tower emissions are based on the method in AP-42 (1/95), Section 13.4, 130,000 GPM total water circulation rate, PM<sub>10</sub> generated by 0.643% of total drift, and with the application of drift eliminators, which will control total liquid drift to 0.001% of water circulation.

**Facility-Wide Emissions**

EU ID#	Source	PM <sub>10</sub>		SO <sub>2</sub>		NO <sub>x</sub>		VOC		CO	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	Turbine #1*	18.00	79.00	9.60	40.00	83.00	254.00	2.90	12.00	68.00	280.00
2	Turbine #2*	18.00	79.00	9.60	40.00	83.00	254.00	2.90	12.00	68.00	280.00
3	Fire Pump	0.88	0.22	0.82	0.20	12.40	3.10	0.99	0.25	2.67	0.67
4	Aux. Boiler	0.20	0.70	0.02	0.07	0.80	2.80	0.40	1.40	0.80	2.80
4-2	Emer. Generator	--	--	--	--	13.52	3.38	1.39	0.35	2.90	0.72
4-3	Emer. Generator	--	--	--	--	0.68	0.17	0.08	0.02	3.71	0.93
5	Cooling Tower	0.02	0.08	--	--	--	--	--	--	--	--
<b>Total</b>		<b>37.10</b>	<b>159.00</b>	<b>20.04</b>	<b>80.27</b>	<b>193.40</b>	<b>517.45</b>	<b>8.66</b>	<b>26.02</b>	<b>146.08</b>	<b>565.12</b>

\* Combustion turbines will also emit lead at 0.22 TPY and H<sub>2</sub>SO<sub>4</sub> at 2.41 TPY combined.

**SECTION V. PSD REVIEW**

There are no emission increases with the proposed MSS for normal operations or to increase annual emissions. Normal operations BACT was done in Permit No. 99-213-C PSD. This PSD review is for MSS, and these MSS emissions will be included in the annual emissions. The MSS short-term emission increases can be accomplished while complying with current annual limits. Since alternative short-term limits are being proposed, a NAAQS and BACT review was completed.

**Best Available Control Technology (BACT)**

Any major stationary source or major modification subject to PSD review must conduct an analysis to ensure the implementation of BACT. The requirement to conduct a BACT analysis is

set forth in the federal PSD regulations (40 CFR 52.21), and in Oklahoma regulations. The State of Oklahoma defines BACT in OAC 252:100-8-31, as follows:

“...means an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the Director, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combination techniques for control of such pollutant.”

Although BACT is determined by evaluating control technologies to determine which are technically and economically feasible, BACT is an emission limit, not the use of a specific technology. A BACT analysis is required to assess the appropriate level of control for each new or physically modified emissions unit for each pollutant that exceeds an applicable PSD significant emission rate (SER). For the proposed Startup/Shutdown/Maintenance emission limits on the Low-NO<sub>x</sub> burners at the McClain generating station, only NO<sub>x</sub> hourly emissions will be considered.

In a 1987 policy memorandum, EPA stated its preference for a top-down approach to BACT analyses. Under the top-down approach, the most stringent control available for a similar or identical source or source category is identified and a determination of feasibility is made. If the top level of control is determined to be infeasible because of technical, economic, environmental, or energy related reasons, then the next most stringent control option is evaluated. This process continues until the BACT level under consideration cannot be eliminated. Presented below are the five basic steps of a top-down BACT review procedure according to the *New Source Review Workshop Manual (Draft)*:

- Step 1. *Identify all control technologies.* The first step in the BACT analysis is to identify all control technologies for each pollutant.
- Step 2. *Eliminate technically infeasible options.* The second step in the BACT analysis is to eliminate any technically infeasible control technologies. Each control technology for each pollutant is considered, and those that are clearly technically infeasible are eliminated. EPA states the following with regard to technical feasibility:

“A demonstration of technical infeasibility should be clearly documented and should show, based on physical, chemical and engineering principles, that technical difficulties would preclude the successful use of the control option on the emissions unit under review.”
- Step 3. *Rank remaining control technologies by control effectiveness.* The control technologies are then ranked in order of effectiveness. If only one option remains or if all remaining options are equivalent, then ranking is not required.
- Step 4. *Evaluate most effective controls and document results.* The remaining control technologies are evaluated on the basis of economic, energy, and environmental considerations.

Step 5. *Select BACT*. The first four steps involve the evaluation of control technologies, but the selection of BACT involves an evaluation of achievable emission rates. The selected BACT emission rate is enforced as a standard unless technological or economic limitations would make the imposition of an emission standard infeasible, in which case a design, equipment, work practice, or operational standard can be imposed.

The EPA has consistently interpreted the statutory and regulatory BACT definitions as containing three core requirements, which the agency believes must be met by any BACT determination, irrespective of whether or not it is conducted in a “top-down” manner. First, the BACT analysis must include consideration of the most stringent available technologies (i.e., those which provide the “maximum degree of emissions reduction”). Second, any decision to require a lesser degree of emissions reduction must be justified by an objective analysis of “energy, environmental, and economic impacts” contained in the record of the permit decision. Thirdly, in no event shall application of BACT result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61.

NO<sub>x</sub> is produced through two mechanisms: thermal NO<sub>x</sub> and fuel NO<sub>x</sub>. Thermal NO<sub>x</sub> is created by high temperature processes where nitrogen and oxygen gases in the air react. Fuel NO<sub>x</sub> is created by combustion of nitrogen-containing materials. Small changes in temperature can cause large changes in NO<sub>x</sub> emissions. Thus, NO<sub>x</sub> formation can be reduced by lowering the flame temperature.

### **Step 1 – Identify All Control Technologies**

As part of the original review for normal operations, dry-low NO<sub>x</sub> burners were proposed and installed as BACT.

The control technologies for this analysis are:

1. Selective Catalytic Reduction (SCR)
2. Selective Non-Catalytic Reduction (SNCR)
3. Water Injection
4. Dry Low NO<sub>x</sub> (DLN) Burners

The applicant proposed a limit of 195 lbs/hr for four (4) hours during startup and 195 lb/hr for fourteen (14) hours during extended startup, which is during a major maintenance activity.

### **Step 2 – Eliminate Technically Infeasible Options**

The NSR Workshop Manual describes two key criteria for determining whether an alternative control technology is technically feasible. According to the NSR Workshop Manual, a technology must be “available” and “applicable” in order to be considered technically feasible. A technology is available “if it has reached the licensing and commercial sales stage of development.” An identified alternative control technique may be considered applicable if “it has been or is soon to be deployed (e.g., is specified in a permit) on the same or similar source type.”

Since the gas stream temperatures are constantly changing during startup and shutdown, and below the minimum temperature for part of each cycle, SCR and SNCR are both technologically infeasible.

Water or steam injection is used after normal operations occur and could quench the flame completely, which would prolong MSS events rather than controlling emissions. Therefore, these options are infeasible during startup.

By design during MSS DLN system must cycle through distinct stages to safely bring the burner on line in its final low NO<sub>x</sub> configuration. During start-up the mixture of air and gas is adjusted to increase the fuel to air ratio to maintain combustion to prevent flameout. The fuel rich mixture results in elevated NO<sub>x</sub> levels due to higher flame temperatures. Therefore, DLN is not feasible during MSS.

### **Step 3 – Rank Control Technologies by Control Effectiveness**

Because the alternative NO<sub>x</sub> control technologies were identified to be technically infeasible during MSS Steps 3 and 4 will not be evaluated further.

### **Step 4 – Evaluate Most Effective Controls Based on Impacts**

Because the alternative NO<sub>x</sub> control technologies were identified to be technically infeasible during MSS Steps 3 and 4 will not be evaluated further.

### **Step 5 – Select BACT**

At the time of construction dry low NO<sub>x</sub> burners (DLN) was selected as BACT. This evaluation will further address available options considering the baseline configuration of DLN currently in operation, since the BACT determination for the PSD construction permit was based on normal continuous operations. The emissions from MSS are included in the annual emission limits, however, the peak hourly emission rates for MSS periods will increase relative to normal operating rates (as shown in the following tables).

**Proposed Cycling Operation Emission Summary**

<b>Event</b>	<b>Maximum Duration (hr)</b>	<b>NO<sub>x</sub> Emissions (lb/hr)<sup>1</sup></b>
Startup	4	195
Extended Startup <sup>2</sup>	14	195

<sup>1</sup> – The lb/hr NO<sub>x</sub> limit is based on a 3-hour rolling average.

<sup>2</sup> – Extended Startup occurring after major overhaul event.



**Annual Emission Comparison**

	<b>NO<sub>x</sub> Emissions (TPY)</b>
Estimated Annual Cycling Operations <sup>1</sup>	221.9
Permit Limits <sup>2</sup>	254

<sup>1</sup> – Estimated highest annual turbine operation using emission inventory 2010-2015

<sup>2</sup> – Annual emission limits from Permit No. 2015-1373-TV2

A review of combined-cycle turbines from EPA website RACT/BACT/LEAR Clearinghouse (RBLC) and the National Combustion Turbine Spreadsheet by Region 4, indicates that there is no known technology that would significantly reduce MSS emissions and be economically justified. However, some restricted MSS operating procedures have been identified through a review of the RBLC. These operating procedures limit the startup and shutdown periods for NO<sub>x</sub> emissions from the combined-cycle turbines.

The RBLC search was conducted for large combustion combined-cycle turbines with an output of 25MW or more, fueled with natural gas. The search also includes sources with SNCR and SCR since these technologies would not be operational during periods of MSS. One hundred fifty sources were evaluated, but only twelve sources have limited MSS operating procedures. The evaluations of each limited startup/shutdown operating procedures are listed following.

**RBLC Results for NO<sub>x</sub> BACT Analysis**

<b>RBLC ID</b>	<b>NO<sub>x</sub>/NO<sub>2</sub> Limitations</b>
CO-0056	NO <sub>x</sub> limited to max. of 100 ppm @15% O <sub>2</sub> during startup and shutdown.
LA-0192	NO <sub>x</sub> is limited to 220 lb/hr during startup. Facility-Wide emissions of NO <sub>x</sub> (from two (2) turbines and two (2) duct burners) are also limited to 74.33 TPY.
LA-0224	During startup/shutdown complete events as quickly as possible according to manufacturer's recommended procedures. NO <sub>x</sub> limit is 400 lb/hr maximum.
OH-0252	The total number of startups and shutdowns shall be limited to 260 cycles (each cycle is one startup and shutdown). Startup/Shutdown for each turbine is 121.2 TPY of NO <sub>x</sub> , 12-month rolling total.
AZ-0047	Emissions of NO <sub>x</sub> from each turbine may not exceed 166.7 lb/hr averaged over the period of each startup or shutdown event.
UT-0066	Startup and shutdown limits: 1000 hr/yr and 8 hr in any day short term excursions: 160 hr/yr and no more than 4 consecutive periods NO <sub>x</sub> 25ppmvd at 15% O <sub>2</sub> .
AZ-0049	NO <sub>x</sub> is not to exceed 2 ppm on a 3-hr average. The facility is limited to 100 lb/hr averaged over each startup and shutdown event.
OH-0254	Limited to 260 cycles (each cycle is one startup and shutdown).
IN-0115	During startup and shutdown, duct burners shall not be used. One event is 1 startup and 1 shutdown, lasting < 6.5 hours. Each turbine < 583 hours/12 months in startup and shutdown mode.
IN-0158	Startup/shutdown NO <sub>x</sub> limit 443 lb
CA-1213	Turbines are NO <sub>x</sub> limited to 70 lb/shutdown event and 160 lb/hour during startup 3-hr average.
OK-0129	During startup and shutdown, NO <sub>x</sub> limited to 568 lb/event 4-hour startup, NO <sub>x</sub> limited to 142 lb/event 1-hour shutdown.

McClain has proposed that BACT for startup emissions of NO<sub>x</sub> is a limitation of 4 hours for startup, 14 hours for extended startup, and 195 lb/hr, 3-hour rolling average. Different limits for warm or cold startup and shutdown have not been specifically proposed. After further review of available emissions data, typical emissions occurring during a shutdown do not exceed the normal operation limit established for NO<sub>x</sub> at 83 lb/hr 3-hour rolling average. Additionally, warm and/or cold startups fit within the proposed startup emission limit for NO<sub>x</sub> of 195 lb/hr 3-hour rolling average for a maximum duration of 4 hours.

BACT for MSS is selected as limiting time for startup to four (4) hours at an emission rate for NO<sub>x</sub> of 195 lb/hr, 3-hour rolling average. BACT for MSS is selected as limiting time for extended startup after major overhaul events to fourteen (14) hours at an emission rate for NO<sub>x</sub> of 195 lb/hr, 3-hour rolling average.

## SECTION VI. AIR DISPERSION MODELING REVIEW

A significance analysis for NO<sub>2</sub> was performed to determine if the emission increase during a turbine startup would have a significant impact upon the area surrounding the McClain Generating Station.

Modeling for NO<sub>x</sub> was completed in accordance with EPA and ODEQ guidance, which outlines a two-step procedure, consisting of a significance analysis and a full impact analysis, for pollutants triggering PSD review. OGE has elected to forego the significance analysis and begin at the full impact analysis. A summary of the NAAQS and PSD Increment model results is provided below.

**NAAQS Modeled Concentrations (µg/m<sup>3</sup>)**

	NO <sub>2</sub>	NO <sub>x</sub>	NO <sub>2</sub>
	1-Hour	Annual	Annual
	(µg/m <sup>3</sup> ) <sup>2</sup>	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> ) <sup>3,4</sup>
<b>Maximum Modeled Concentration</b>	95.49	6.12	4.59
<b>Background Concentration<sup>1</sup></b>	68.98	11.08	11.08
<b>Total Concentration</b>	164.47	17.20	15.67
<b>NAAQS</b>	188	--	100
<b>Cause/Contribute Analysis Required?</b>	<b>No</b>	--	<b>No</b>

- 1) Monitored background concentrations obtained from EPA's Air Data website: <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report> (Station No. 401091037).
- 2) 5-year average of the 98<sup>th</sup> percentile of the annual distribution of the daily maximum 1-hour concentrations.
- 3) Highest annual average concentration over 5 years.
- 4) Per Ambient Ratio Method, 75% of ambient NO<sub>x</sub> is considered NO<sub>2</sub>.

**Class II PSD Increment Modeled Concentrations ( $\mu\text{g}/\text{m}^3$ )**

	<b>NO<sub>x</sub> Annual (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>NO<sub>2</sub> Annual (<math>\mu\text{g}/\text{m}^3</math>)<sup>1,2</sup></b>
<b>Maximum Modeled Concentration</b>	5.80	4.35
<b>PSD Increment</b>	--	25
<b>Cause/Contribute Analysis Required?</b>	--	No

1) Highest annual average concentration over 5 years.

2) Per Ambient Ratio Method, 75% of ambient NO<sub>x</sub> is considered NO<sub>2</sub>.

**Model Selection**

EPA's American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) (version 16216r) was used. The AERMOD model, a steady-state plume dispersion model used for assessment of pollutant concentrations from a variety of sources, has become the primary model used for conducting refined modeling analyses. AERMOD incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.

**Terrain**

Modeling with elevated terrain was used for this analysis. AERMAP (version 11103), a terrain preprocessor that incorporates complex terrain using USGS Digital Elevation Data was used to determine stack, building, and receptor elevations/hill heights. One-third (1/3) arc second National Elevation Dataset (NED) files were used to determine the receptor and source elevations used in the model.

**Stack GEP Analysis & Building Downwash**

Building wake effects on each emission point source were incorporated through the use of the BPIP-PRIME (version 04274) algorithm. BPIP-PRIME calculates all direction specific building data required by the air dispersion model to enable it to include the appropriate building downwash algorithm into the calculations. The structure dimensions are then imported into AERMOD on an emission point-specific basis.

**Meteorological Data**

Pre-processed meteorological data (AERMET version 15181) obtained from the ODEQ was used for the modeling analysis. Integrated Surface Hourly (ISH) meteorological data from the Will Rogers World Airport (KOKC – Station # 13967) was provided for years 2011 through 2015. For all meteorological years (2011 to 2015), upper air data from the OU Max Westheimer Airport, (KOUN - Station # 3948) was used. A copy of the meteorological data is included with the model files in Appendix A.

### **Receptor Grid**

The receptor grid used in this analysis reflects ODEQ's current guidance. Ground-level concentrations are calculated for receptors located on five Cartesian grids covering a region that extends at least 10 km from all facility emission sources. The grids are defined as follows:

- A fence line grid containing 50 meter-spaced receptors located along the facility fence line.
- A 100-meter grid containing 100 meter-spaced receptors, extending approximately 1.0 km from the fence line, exclusive of the fence line grid.
- A 250-meter grid containing 250 meter-spaced receptors, extending approximately 2.5 km from the fence line, exclusive of the 100 meter grid.
- A 500-meter grid containing 500 meter-spaced receptors, extending approximately 5.0 km from the fence line, exclusive of the 250 meter grid.
- A 750-meter grid containing 750 meter-spaced receptors, extending approximately 7.5 km from the fence line, exclusive of the 500 meter grid.
- A 1,000-meter grid containing 1,000 meter-spaced receptors, extending approximately 24 km from the fence line, exclusive of the 750 meter grid.

### **Significance Analysis**

A significant impact analysis is the first level of modeling performed in a PSD evaluation. For each applicable pollutant, the analysis must include all increases in stack emissions and quantifiable fugitive emissions resulting only from the Project.

EPA has confirmed that the primary purpose of the SIL is to serve as a screening tool to identify a level of ambient impact that is sufficiently low relative to the NAAQS or PSD increments such that the impact can be considered trivial or de minimis. Accordingly, a source that demonstrates that the projected ambient impact of its proposed emissions increase does not exceed the SIL is expected to have a de minimis impact on air quality and will not cause or contribute to a violation of a NAAQS or PSD increment.

Modeled impacts from the significant impact analysis are compared to the significant impact levels (SILs) as defined in the *New Source Review Workshop Manual* and OAC 252:100-8-35(a)(2). If the highest modeled concentration over five years of meteorological data is less than or equal to the applicable SIL, then it is presumed that impacts from the project do not cause or contribute to a violation of any applicable standards. Additional refined modeling is required for any pollutant and averaging period combination whose highest modeled concentration is greater than a SIL. In this model report, OGE has elected to forego the significance analysis and proceed to the full impacts analysis.

### **Full Impact Analysis**

If a pollutant exceeds its respective SIL, a full impact analysis is performed to determine compliance with NAAQS and PSD increment standards. The first step in the Full Impact Analysis is to determine the Radius of Impact (ROI). The ROI is the distance from the facility to

the farthest receptor that shows an impact at or above the SIL for each pollutant and averaging period. Rather than complete the significance analysis necessary to determine the ROI, OGE requested ODEQ provide a suitable and conservative inventory of off-property sources for the surrounding area. The full impact analysis was performed using the full receptor grid.

### **NAAQS Analysis**

To complete the NAAQS Analysis, the facility wide post-project emissions are modeled simultaneously with the emissions from the NAAQS sources identified in the inventory provided by the ODEQ. The background concentrations for the respective averaging periods are added to the modeled concentration for comparison with the NAAQS. The appropriate modeled concentration plus the calculated monitored background is compared to the corresponding NAAQS to predict if the post-project emissions will cause or contribute to a violation of the NAAQS.

#### **Ambient Ratio Method 2**

Modeling of NO<sub>x</sub> emissions in AERMOD can follow one of several application methods, each outlined in an EPA clarification memorandum. The Tier 2 method Ambient Ratio Method 2 (ARM2) was used in conducting the NO<sub>2</sub> 1-hour NAAQS analysis. ARM2 is available as a non-default beta option in AERMOD, similar to the current OLM and PVMRM Tier 3 NO<sub>2</sub> screening options. EPA believes that the results from ARM2 are generally more conservative relative to the Tier 3 methods of Ozone Limiting Method (OLM) and Plume Volume Molar Ratio Method (PVMRM) which are consistent with the tier screening approach currently recommended in Appendix W for NO<sub>2</sub>. PVMRM considers the conversion of NO<sub>x</sub> emissions to NO<sub>2</sub> in the atmosphere on an hour-by-hour basis. ARM2 is a sixth-order polynomial regression based on the 98<sup>th</sup> percentile ratios generated from each bin (AQS data was binned into 10 ppb increments for NO<sub>x</sub> values less than 200 ppb and into bins of 20 ppb for NO<sub>x</sub> values between 200 and 600 ppb). The ARM2 equation is then used to compute an NO<sub>2</sub>/NO<sub>x</sub> ratio based on the total NO<sub>x</sub> levels.

### **PSD Increment Analysis**

The PSD increment is the maximum increase in concentration that is allowed to occur above a baseline concentration for a pollutant. The baseline concentration is defined (for each pollutant and averaging time) as the ambient concentration that existed at the time the first PSD application affecting an area was submitted. The baseline date depends upon the county in which the facility is located and on the pollutant in question. Sources that contribute to emissions increases (or decreases) after the baseline date are obtained from the ODEQ and are modeled along with total facility-wide potential emissions to determine if the proposed project will cause or contribute to a PSD increment exceedance.

The pollutant evaluated in the modeling analysis is NO<sub>2</sub>. Modeling conducted for the MSS events is conservatively based on the assumption that all hours in each year are at the full MSS

emission rate. A summary of the modeled emissions as well as modeled parameters are provided in the modeling report submitted to ODEQ.

Inventory source emissions were provided by ODEQ for inclusion in this modeling analysis. Modeled emissions and parameters are provided in the modeling report submitted to ODEQ.

## **SECTION VIII. OKLAHOMA AIR POLLUTION CONTROL RULES**

OAC 252:100-1 (General Provisions) [Applicable]  
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]  
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]  
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma is in attainment of these standards.

OAC 252:100-5 (Registration, Emission Inventory, and Annual Fees) [Applicable]  
The owner or operator of any facility that is a source of air emissions shall submit a complete emission inventory annually on forms obtained from the Air Quality Division. Emission inventories have been submitted and fees paid for the past years.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]  
Part 5 includes the general administrative requirements for part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for single HAP that the EPA may establish by rule

OAC 252:100-9 (Excess Emission Reporting Requirements) [Applicable]  
Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for mitigation, as described in

OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning)

[Applicable]

Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter)

[Applicable]

This subchapter specifies a particulate matter (PM) emissions limitation of 0.20 lb/MMBtu from new and existing fuel-burning equipment with a rated heat input between 1,000 and 10,000 MMBtu/hr. The turbines, rated at 1,683.3 MMBtu/hr, are required to burn only pipeline quality natural gas with an emission limit of 18 lb/hr. Based on these requirements, the turbines have PM emissions of 0.01 lb/MMBtu, below the Subchapter 19 limit. The auxiliary boiler and emergency diesel fire-water pump engine are limited to 0.35 lb/MMBtu. AP-42, Table 1.4-2 (3/98) lists PM emissions for the auxiliary boiler for natural gas to be 7.6 lb/MMcf or about 0.0076 lb/MMBtu. Based on AP-42 (10/96) Section 3.3, the emergency diesel fire-water pump engine will have emissions of 0.31 lb/MMBtu. Therefore, the turbines, auxiliary boiler, and emergency diesel fire-water pump engine are in compliance with Subchapter 19. According to AP-42 (7/00), the 40-hp propane-fired emergency generator engine will have PM emissions of approximately 0.02 lb/MMBtu which is in compliance with the limit of 0.6 lb/MMBtu fuel-burning equipment with a rated heat input of 10 MMBtu/hr or less set in Subchapter 19.

OAC 252:100-25 (Visible Emissions and Particulates)

[Applicable]

No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. The turbines and auxiliary boiler use natural gas. The emergency fire-fighting pump and one of the emergency generators use low-sulfur diesel. The second generator uses propane. Therefore, it is not necessary to specify any unique procedures to ensure compliance.

OAC 252:100-29 (Fugitive Dust)

[Applicable]

No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. Under normal operating conditions, this facility will not cause a problem in this area, therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds)

[Applicable]

Part 2 limits the ambient air concentration of hydrogen sulfide ( $\text{H}_2\text{S}$ ) emissions from any facility to 0.2 ppmv (24-hour average) at standard conditions which is equivalent to  $283 \mu\text{g}/\text{m}^3$ . Fuel-burning equipment fired with commercial natural gas will not have the potential to exceed the  $\text{H}_2\text{S}$  ambient air concentration limit.

Part 5 limits sulfur dioxide emissions from new equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/million BTU heat input. The turbines are limited to burn pipeline quality natural gas at 9.60 lb/hr emissions, based on manufacturer's data, which is equivalent to 0.006 lb/MMBtu. The auxiliary boiler is limited to burn pipeline quality natural gas at 0.02 lb/hr emissions, based on manufacturer's data, which is equivalent to 0.001 lb/MMBtu. Thus, a limitation to only burn pipeline quality natural gas provides compliance for the turbines and auxiliary boiler. Liquid fuels are limited to 0.8 lb/MMBtu heat input. The emergency diesel fire-water pump engine and the emergency generator are limited to burn diesel fuel at 0.5%wt sulfur, based on AP-42 this is equivalent to 0.52 lb/MMBtu. Thus, a limitation to only burn low sulfur diesel fuel provides compliance for the diesel engines. The second backup generator is required to burn propane. AP-42, Table 1.5-1 (10/96), lists the total SO<sub>2</sub> emissions for propane as 0.10S lb/10<sup>3</sup> gallons. S equals the sulfur content expressed in gr/100 ft<sup>3</sup> gas vapor. Propane has an average sulfur content of approximately 6 gr/100 ft<sup>3</sup>. Therefore, the total SO<sub>2</sub> emissions for propane are approximately 0.0065 lb/MMBtu which is in compliance with this limitation.

Part 5 also requires an opacity monitor and sulfur dioxide monitor for equipment rated above 250 MMBtu. Since the turbines are limited to natural gas only, they are exempt from the opacity monitoring requirement. Based on the pipeline quality gas requirement, the natural gas burned at the site will have less than 0.1 percent sulfur and is, therefore, exempt from the sulfur dioxide monitoring requirement.

#### OAC 252:100-33 (Nitrogen Oxides)

[Applicable]

This subchapter limits new gas-fired fuel-burning equipment with rated heat input greater than or equal to 50 MMBtu/hr to emissions of 0.2 lbs of NO<sub>x</sub> per MMBtu, three-hour average. The maximum three-hour rolling average emission rate for the turbines, based on the BACT requirement, is 83.00 lb/hr or 0.05 lbs of NO<sub>x</sub> per MMBtu, which is in compliance. The turbines cannot meet the requirements of OAC 252:100-33-2(a) during startup and/or shutdown. The turbines shall comply with the MSS BACT of four (4) hours for NO<sub>x</sub> of 195 lbs/hr, 3-hour rolling total for startup, and MSS BACT of fourteen (14) hours for NO<sub>x</sub> of 195 lbs/hr, 3-hour rolling total for extended startup. The NO<sub>x</sub> emissions during MSS of the turbines shall not cause or contribute to an exceedance of any NAAQS or PSD increment.

#### OAC 252:100-35 (Carbon Monoxide)

[Not Applicable]

This facility has none of the affected sources: foundry cupola, blast furnace, basic oxygen furnace, catalytic cracking unit, or other petroleum or natural gas process except stationary engines.

#### OAC 252:100-37 (Volatile Organic Compounds)

[Applicable]

Part 3 requires VOC constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. No such tanks are to be located on-site.

Part 5 limits the VOC content of coatings used in coating lines or coating operations. This facility does not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is exempt.



Part 7 requires fuel-burning equipment to be operated and maintained so as to minimize emissions. Temperature and available air must be sufficient to provide essentially complete combustion. Combustion control is a BACT requirement to minimize emissions.

OAC 252:100-42 (Toxic Air Contaminants (TAC))

[Applicable]

This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated, there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping)

[Applicable]

This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

**The following Oklahoma Air Pollution Control Rules are not applicable to this facility:**

OAC 252:100-11	Alternative Emissions Reduction	not requested
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Grain Elevators	not in source category
OAC 252:100-39	Nonattainment Areas	not in area category
OAC 252:100-47	Municipal Solid Waste Landfills	not in source category

**SECTION VIII. FEDERAL REGULATIONS**

PSD, 40 CFR Part 52

[Applicable]

The facility is a listed source as a fossil fuel-fired electric plant of more than 250 MMBtu heat input with emissions greater than 100 TPY. A complete PSD review was completed in the memorandum of Permit No. 99-213-C (PSD) and Permit No. 2015-1373-C (M-1).

NSPS, 40 CFR Part 60

[Subparts Dc, GG and JJJJ Are Applicable]

Subpart GG, Stationary Gas Turbines. This subpart affects stationary gas turbines which commenced construction, reconstruction, or modification after October 3, 1977, with a heat input at peak load of greater than or equal to 10 MMBtu/hr based on the lower heating value of the fuel. The new turbines have heat input capacities at peak load of 1,586 MMBtu and are, therefore, affected sources. Standards specified in Subpart GG limit NO<sub>x</sub> emissions to 87 ppm<sub>d</sub>v or less. Sulfur dioxide standards specified in Subpart GG require that the owner/operator comply with one or the other of the following: (a) exhaust gases must not exceed 150 ppm<sub>v</sub> SO<sub>2</sub> (at 15% oxygen on a dry basis) or (b) no fuel shall be used which exceeds 0.8% by weight sulfur. In accordance with §60.334(h)(3), the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted if the gaseous fuel is demonstrated to meet the definition of "natural gas" using either the gas quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract, or using representative fuel sampling data. The maximum total sulfur content of "natural gas" is 20 grains/100 SCF (680 ppm<sub>w</sub>, 0.068% by weight, or 338 ppm<sub>v</sub>) or less.

For the NO<sub>x</sub> emissions, the BACT requirement of 9 ppm<sub>d</sub>v at 15% oxygen is more stringent than what is required in Subpart GG and, therefore, demonstrates compliance with this subpart. Monitoring fuel for nitrogen content is not required if the owner or operator does not claim an allowance for fuel bound nitrogen per 60.334(h)(2). While nitrogen content monitoring is not required for turbines burning exclusively pipeline-quality natural gas, monitoring under Acid Rain will be required to demonstrate continued compliance with the 9 ppm<sub>d</sub>v limit. Subpart GG standards apply at all times based on rule requirements regardless of MSS PSD BACT allowances.

Subpart Dc, Industrial-Commercial-Institutional Steam Generating Units. This Subpart affects steam generating units with a design capacity between 10 and 100 MMBtu/hr heat input and which commenced construction or modification after June 9, 1989. For gaseous-fueled units, the only applicable standard of Subpart Dc is a requirement to keep records of the fuels used. The 22 MMBtu/hr gas-fired auxiliary boiler is an affected unit as defined in the subpart since the heating capacity is above the de minimis level. Recordkeeping is specified in the permit.

Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, affects stationary compression ignition (CI) internal combustion engines (ICE) based on power and displacement ratings, depending on date of construction, beginning with those constructed after July 11, 2005. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator. The emergency fire pump engine and emergency generator engine were constructed prior to promulgation of Subpart IIII.

Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI-ICE). It promulgates emission standards for new SI engines ordered after June 12, 2006 and all SI engines modified or reconstructed after June 12, 2006, regardless of size. The specific emission standards (either in g/hp-hr or as a concentration limit) vary based on engine class, engine power rating, lean-burn or rich-burn, fuel type, duty (emergency or non-emergency), and manufacture date. Engine manufacturers are required to certify certain engines to meet the emission standards and may voluntarily certify other engines. An initial notification is only required for owners and operators of engines greater than 500 HP that are non-certified. The

propane-fired emergency generator (EU 4-3) is certified to meet the standards of Subpart JJJJ: 10 g/hp-hr NO<sub>x</sub>+HC and 387 g/hp-hr CO.

Subpart KKKK, Stationary Combustion Turbines. This subpart proposes standards for new stationary combustion turbines with a power output at peak load greater than or equal to 1 MW that commences construction, modification or reconstruction after February 18, 2005. The turbines at this facility have a power output greater than 1 MW at peak load, were built prior to the effective date, and therefore are not subject to this subpart.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, beryllium, coke oven emissions, radionuclides or vinyl chloride. The facility emits mercury and benzene but it is not one of the applicable sources and is, therefore, exempt from this part. Subpart J, Equipment Leaks of Benzene, concerns only process streams that contain more than 10% benzene by weight. Analysis of Oklahoma natural gas indicates a maximum benzene content of less than 1%.

NESHAP, 40 CFR Part 63

[Subpart ZZZZ Applicable]

Subpart YYYY, Stationary Combustion Turbines. This subpart was promulgated on March 5, 2004 and affects stationary combustion turbines that are located at a major source of HAPs. This facility is a minor source.

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart previously affected only RICE with a site-rating greater than 500 brake horsepower that are located at a major source of HAP emissions. On January 18, 2008, the EPA published a final rule that promulgates standards for new and reconstructed engines (after June 12, 2006) with a site rating less than or equal to 500 HP located at major sources, and for new and reconstructed engines (after June 12, 2006) located at area sources. Owners and operators of new or reconstructed engines at area sources and of new or reconstructed engines with a site rating equal to or less than 500 HP located at a major source (except new or reconstructed 4-stroke lean-burn engines with a site rating greater than or equal to 250 HP and less than or equal to 500 HP located at a major source) must meet the requirements of Subpart ZZZZ by complying with either 40 CFR Part 60 Subpart IIII (for CI engines) or 40 CFR Part 60 Subpart JJJJ (for IS engines). The 40-hp 2.4-L propane-fired, spark-ignition engine that drives the 20-kW Generac Model QT025 will meet the NESHAP, Subpart ZZZZ requirements by complying with NSPS, Subpart JJJJ.

On August 20, 2010, EPA finalized the requirements for stationary SI RICE located at area sources. A summary of the requirements for the 400-hp Caterpillar G3208 emergency fire pump engine and the 438-hp Caterpillar G3406 emergency generator engine are shown below.

**Summary of NESHAP, Subpart ZZZZ Requirements**

<b>Engine Category</b>	<b>Normal Operation @ 15% O<sub>2</sub></b>
Existing Emergency CI & Black Start CI	Change oil and filter every 500 hours of operation or annually, whichever one comes first; Inspect air cleaner every 1,000 hours of operation or annually, whichever one comes first; and Inspect all hoses and belts every 500 hours of operation or annually, whichever one comes first and replace as necessary.

Sources have the option to utilize an oil analysis program in order to extend the specified oil change requirements of this subpart. Initial compliance demonstrations must be conducted within 180 days after the compliance date. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

Other applicable requirements include:

- 1) The owner/operator must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- 2) Existing emergency stationary RICE located at an area source of HAP emissions must install a non-resettable hour meter if one is not already installed.

The permit requires the owner/operator to comply with all applicable requirements of this subpart.

Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters. This subpart establishes national emission limitations and work practice standards for HAPs emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAPs. The facility is a minor source of HAPs and, therefore, this subpart is not applicable.

Subpart JJJJJ, Industrial, Commercial, and Institutional Boilers Area Sources. This subpart applies to new and existing industrial, commercial, and institutional boilers located at area sources of HAPs. The 22-MMBtu/hr natural gas-fired auxiliary boiler located at the facility was installed prior to June 4, 2010 and it is considered to be an existing source as defined in § 63.11194. The unit is a gas-fired boiler and, in accordance with § 63.11195, it is exempt from the requirements of this subpart.

CAM, 40 CFR Part 64 [Not Applicable]  
Compliance Assurance Monitoring (CAM) as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source, that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY

The turbines do not utilize any controls, and therefore are not subject to CAM, 40 CFR Part 64.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]  
 The turbines burn natural gas only. Natural gas is a listed substance in CAAA 90 Section 112(r). However, this substance is not stored on site. The small quantity which is in the pipelines on the facility is much less than the 10,000 pound threshold and, therefore, is excluded from all requirements including the Risk Management Plan. The chemicals used to treat the process water are not on the list of regulated substances (Section 112r Clean Air Act 1990). More information on this federal program is available on the web page: [www.epa.gov/rmp](http://www.epa.gov/rmp)

Acid Rain, 40 CFR Part 72 (Permit Requirements) [Applicable]  
 This facility is an affected source since it is a simple cycle unit that commenced operation after November 15, 1990, and must submit an Acid Rain permit application in accordance with the requirements in 40 CFR 72.30. The facility is currently operating under Acid Rain Permit No. 2013-1135-ARR2.

Acid Rain, 40 CFR Part 73 (SO<sub>2</sub> Requirements) [Applicable]  
 This part provides for allocation, tracking, holding, and transferring of SO<sub>2</sub> allowances.

Acid Rain, 40 CFR Part 75 (Monitoring Requirements) [Applicable]  
 The facility shall comply with the emission monitoring and reporting requirements of this part.

Acid Rain, 40 CFR Part 76 (NO<sub>x</sub> Requirements) [Not Applicable]  
 This part provides for NO<sub>x</sub> limitations and reductions for coal-fired utility units. Since the facility will fire natural gas only, it is exempt.

Stratospheric Ozone Protection, 40 CFR Part 82 [Subpart A and F Applicable]  
 These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform

(Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.

Conditions are included in the permit to address the recordkeeping requirements specified at §82.13 of this regulation. Recordkeeping requirements specific to manufacturing facilities include those for importers of Class I substances, or for persons who destroy Class I controlled substances.

Subpart F requires that any persons servicing, maintaining, or repairing appliances except for motor vehicle air conditioners; persons disposing of appliances, including motor vehicle air conditioners; refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment comply with the standards for recycling and emissions reduction.

Federal NO<sub>x</sub> and SO<sub>2</sub> Trading Programs, 40 CFR Part 97 [Subpart BBBBBB Applicable]  
Subpart BBBBBB, Transport Rule (TR) Ozone Season NO<sub>x</sub> Trading Program. This subpart establishes allowance and monitoring provisions for the TR NO<sub>x</sub> Ozone Season Trading Program, under section 110 of the Clean Air Act and under a Federal Implementation Plan (FIP) codified as 40 CFR §52.38. Turbines #1 and #2 are considered to be TR NO<sub>x</sub> Ozone Season units subject to the requirements of this subpart. Under this subpart, the permittee is required to designate an official representative, monitor emissions, keep records, and make reports in accordance with §§97.530 through 97.535 and the monitoring program must comply with §§75.53, 75.62 and 75.73 or an alternative monitoring program must be requested and approved. TR NO<sub>x</sub> Ozone Season allowances are periodically allocated to the facility and, at the completion of the allowance transfer deadline for the control period in a given year, the permittee is required to hold, in the source's compliance account administered by the EPA Clean Air Markets Division (CAMD), sufficient allowances available for deduction for such control period under §97.524(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for the control period from all TR NO<sub>x</sub> Ozone Season units at the facility. The control period starts on May 1 of a calendar year, except as provided in §97.506(c)(3), and ends on September 30 of the same year. For the TR Ozone Season NO<sub>x</sub> Trading Program the deadline for obtaining sufficient allowances is midnight of November 1 (if November 1 is a business day) or midnight of the first business day after November 1 (if November 1 is not a business day). Fines and future allowance deductions will be levied as described in §97.506 if the permittee holds insufficient allowances at the completion of the allowance transfer deadline. The process of establishing an allowance account and requirements for administering an account are included in §97.520. The recording of allowance allocations is described in §97.521. Submission and recording of allowance transfers is described in §§97.522 and 97.523. Compliance with ozone season emissions limitations and assurance provisions are described in §§97.524 and 97.525. Extra allowances may be banked (see §97.526) and these vintage allowances may be used in later years with certain restrictions. These allowances do not constitute a property right. No title V permit revision is required for any allocation, holding, deduction, or transfer of allowances in

accordance with this subpart. The permit includes the requirement to comply with all applicable requirements of this subpart.

## **SECTION IX. COMPLIANCE**

### **Inspection**

Andrew Thomas, Environmental Programs Specialists with the Department of Environmental Quality, Air Quality Division ("DEQ"), conducted an air quality Full Compliance Evaluation (FCE) on June 1, 2017. Ben Privett, Manager Plant Operations, represented OG&E. The only violations were for excess emissions, which are addressed by issuance of this permit

### **Testing**

The turbines are subject to annual testing to confirm the accuracy of the CEMS. Relative Accuracy Test Audits (RATAs) for Unit 1 were conducted on April 28, 2015, and submitted to AQD on October 20, 2015. Relative Accuracy Test Audits (RATAs) for Unit 2 were conducted on April 9, 2015 and submitted to AQD on May 19, 2015.

### **Tier Classification and Public Review**

This application has been determined to be a **Tier II** based on the request for a construction permit modification for an existing major source. Therefore, public and EPA review is required.

### **Public Review**

The applicant published the "Notice of Filing a Tier II Application" in "*The Newcastle Pacer*", a weekly newspaper printed and published in McClain County, Oklahoma on February 23, 2017. The notice stated that the application was available for public review at the Newcastle Public Library, 705 NW 10<sup>th</sup>, Newcastle, OK 73065 and at the Oklahoma City DEQ Air Quality Division's main office.

The applicant published the "Notice of Tier II Draft Permit" in "*The Newcastle Pacer*", a weekly newspaper printed and published in McClain County, Oklahoma. The notice stated that the Draft Permit was made available for public review for 30 days at the Newcastle Public Library, at the Air Quality Division's main office, and on the Air Quality section of the DEQ web page at <http://www.deq.state.ok.us>.

The "draft" permit was submitted for public comment for a 30-day review period, no comments were received.

The proposed permit was submitted to EPA Region 6 for a 45-day review period, no comments were received.

The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant possesses a current lease or easement given by the landowner for the purposes stated in the application.

**State Review**

The facility is not located within 50 miles of the Oklahoma border.

Information on all permit actions is available for review by the public in the Air Quality section of the DEQ Web page: [www.deq.state.ok.us/](http://www.deq.state.ok.us/).

**Fees Paid**

The Part 70 Construction Permit Modification fee of \$5,000 was paid. On November 10, 2016, \$3,000 was submitted and on December 21, 2016, an additional \$2,000 was submitted.

**SECTION X. SUMMARY**

The facility was constructed and is currently operating as described in the permit application. Ambient air quality standards are not threatened at this site. There are no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the construction permit is recommended.





SCOTT A. THOMPSON  
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN  
Governor

DEC - 8 2017

Oklahoma Gas & Electric  
Attn: Mr. Michael Hixon  
321 N. Harvey, MC610  
Oklahoma City, OK 73101

Re: Permit Application No. **2015-1373-C (M-1) PSD**  
McClain Generating Station  
Facility ID: 3694  
Section 35, Township 10N, Range 4W  
Newcastle, McClain County, Oklahoma

Dear Mr. Hixon:

Enclosed is the permit authorizing construction/modification of the referenced facility. Please note that this permit is issued subject to the certain standards and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emissions inventory for this facility. An emissions inventory must be completed on approved AQD forms and submitted (hardcopy or electronically) by April 1<sup>st</sup> of every year. Any questions concerning the form or submittal process should be referred to the Emissions Inventory Staff at 405-702-4100.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact me at [sharon.alder@deq.ok.gov](mailto:sharon.alder@deq.ok.gov) or at (405) 702-4209.

Sincerely,

Phillip Fielder, P.E.  
Permits & Engineering Group Manager  
**AIR QUALITY DIVISION**

Enclosures





## PART 70 PERMIT

AIR QUALITY DIVISION  
STATE OF OKLAHOMA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
707 N. ROBINSON STREET, SUITE 4100  
P.O. BOX 1677  
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 2015-1373-C (M-1) PSD

Oklahoma Gas & Electric

having complied with the requirements of the law, is hereby granted permission to  
construct/modify the McClain Generating Station, Section 35, Township 10N, Range 4W,  
McClain County, Oklahoma, subject to the Standard Conditions dated July 21, 2009, and  
Specific Conditions, both of which are attached.

In the absence of construction commencement, this permit shall expire 18 months from the issuance date, except as authorized under Section VIII of the Standard Conditions.

  
\_\_\_\_\_  
Division Director  
Air Quality Division

12-5-17  
\_\_\_\_\_  
Date

**PERMIT TO CONSTRUCT  
AIR POLLUTION CONTROL FACILITY  
SPECIFIC CONDITIONS**

**OG&E**

**McClain Generating Station**

**Permit Number 2015-1373-C (M-1) PSD**

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on November 10, 2016, and additional information submitted on February 6, 2017. The Evaluation Memorandum, dated December 4, 2017, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction and/or continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Points of emissions and emissions limitations for each point: [OAC 252:100-8-6(a)(1)]

**a. Combustion Turbines**

<b>Each of Combustion Turbines #1 and #2</b>				
<b>Pollutant</b>	<b>lb/hr<sup>1</sup></b>	<b>TPY</b>	<b>ppmvd</b>	<b>lb/MMBtu<sup>3</sup></b>
NO <sub>x</sub>	83.00	254.00	9 <sup>2</sup>	0.053 <sup>2</sup>
SO <sub>2</sub>	9.60	40.00	--	--
PM <sub>10</sub>	18.00	79.00	--	0.01
VOC	2.90	12.00	--	--
CO	68.00	280.00	20	--

<sup>1</sup> The lb/hr limit is based on a 3-hours rolling average.

<sup>2</sup> The 9 ppmvd (parts per million by volume, dry basis, corrected to 15% oxygen) NO<sub>x</sub> annual limit shall be calculated as a 12-month rolling average at the end of each calendar month. The concentrations shall be calculated by summing the concentrations computed for each hour of operation and dividing by the number of hours the unit was operated during the averaging period. If the calculations performed in accordance with 40 CFR Part 75 requirements yield values in excess of the NO<sub>x</sub> BACT limits, the applicant may recalculate, performing their compliance demonstration using the procedures for CEMS under 40 CFR Part 60.

<sup>3</sup> Based on LHV.

For startup and extended startup (maintenance) periods, the alternative emissions limitations for each combustion turbine are listed below:

<b>Event</b>	<b>Maximum Duration (hr)</b>	<b>NO<sub>x</sub> Emissions (lb/hr)<sup>1</sup></b>
Startup	4	195
Extended Startup <sup>2</sup>	14	195

<sup>1</sup> The lb/hr NO<sub>x</sub> limit is based on a 3-hour rolling average.

<sup>2</sup> Startup occurring after major overhaul event.

## b. Auxiliary Boiler

Pollutant	lb/hr <sup>1</sup>	TPY	lb/MMBtu <sup>2</sup>
NOx	0.80	2.80	0.035
SO <sub>2</sub>	0.02	0.07	--
PM <sub>10</sub>	0.20	0.70	--
VOC	0.40	1.40	--
CO	0.80	2.80	0.037

1 The lb/hr limit is a one hour maximum limit.

2 The limit shall be calculated as a 12-month rolling average at the end of each calendar month.

## c. Cooling Towers

Pollutant	lb/hr <sup>1,2</sup>	TPY
PM <sub>10</sub>	0.018	0.079

1 This is the combined total of all the towers.

2 The lb/hr limit is a one hour maximum limit.

## d. Emergency Engines

EU ID#	Point ID#	EU Name/Model	Serial Number	Capacity (HP)	Construction Date
4-1	4-1	Emergency Fire pump Caterpillar 3208	03Z17562	400	2000
4-2	4-2	Emergency Generator Caterpillar 3406	1LS01263	438	2000
4-3	4-3	Generac QT025A Emergency Generator w/2.4-L Engine	6216669	40	2010

2. The fuel-burning equipment shall use only pipeline quality natural gas, except Unit EU 4-3, which shall use propane or natural gas, and except for the emergency diesel fire-water pump engine and the emergency generator which shall burn diesel fuel with a maximum sulfur content of 0.05%. Compliance can be shown by the following methods: for pipeline grade natural gas, using either a current valid purchase contract, tariff sheet, or transportation contract or representative fuel sampling as per 40 CFR Part 75 Appendix D; for other gaseous fuel, a current lab analysis, stain-tube analysis, gas contract, tariff sheet, and other approved methods. Compliance shall be demonstrated at least once each calendar year. [OAC 252:100-8-6(a)(3)]

3. NOx concentrations listed in Specific Condition No. 1 shall not be exceeded except during periods of startup and extended startup. Such periods shall not exceed the hours per occurrence as defined in Specific Conditions 1 and 4. When monitoring shows concentrations in excess of the ppm, lb/hr, lb/MMBTU (LHV) or lb/hr startup event limits of Specific Condition No. 1, the owner or operator shall comply with the provisions of OAC 252:100-9 for excess emissions.

[OAC 252:100-9]

4. During startups alternate emission limits apply to the combustion turbines. Startup events shall not exceed four hours per turbine. Startup events after major overhaul activities shall not exceed fourteen hours. During a startup event for each turbine, NO<sub>x</sub> shall be limited to 195 lb/hr 3-hour rolling average.

**Startup:** Startup begins when fuel is supplied to the gas turbine. Startup ends when the gas turbine reaches dry low NO<sub>x</sub> (DLN) mode (Mode 6QL as direct by the control system).

**Extended Startup:** A startup or series of startups, beginning after major overhaul activities, that is required by the manufacturer or industry standard for the proper and safe operation of the unit.

5. Since the normal operations of NO<sub>x</sub> emission standard is based on a 3-hour rolling average, it is noted that the 3-hour average calculation of NO<sub>x</sub> emissions may exceed the normal standards (83.00 lb/hr) for up to 7 hours after startup. Therefore, such occurrences are not considered exceedences of emission standards and are not required to be reported to the DEQ unless they exceed the limits of Specific Condition No. 4.

6. Startups following maintenance activities that require additional time beyond that of a normal startup event are required to provide DEQ advanced notice. Notice shall include a date or date range of the extended startup and reason for the extended startup. Extended startup events following maintenance shall not exceed 14 hours per turbine and shall be limited to 195 lb/hr 3-hour rolling average.

7. Engine EU 4-3 is subject to 40 CFR Part 60, Subpart JJJJ, and shall comply with all applicable standards for owners or operators of stationary spark ignition internal combustion engines:

- a. §60.4230 Am I subject to this subpart?
- b. §60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?
- c. §60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?
- d. §60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?
- e. §60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?
- f. §60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?
- g. §60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?
- h. §60.4246 What parts of the General Provisions apply to me?

8. Engines EU 4-1, 4-2, and 4-3 are subject to NESHAP, 40 CFR Part 63, Subpart ZZZZ, and shall comply with all applicable requirements, including, but not limited to, the following.

[40 CFR 63.6580 through 63.6675]

- a. §63.6580 What is the purpose of subpart ZZZZ?
- b. §63.6585 Am I subject to this subpart?
- c. §63.6590 What parts of my plant does this subpart cover?
- d. §63.6595 When do I have to comply with this subpart?
- e. §63.6600 What emission limitations and operating limitations must I meet?
- f. §63.6601 What emission limitations must I meet?
- g. §63.6602 What emission limitations and other requirements must I meet?
- h. §63.6603 What emission limitations, operating limitations, and other requirements must I meet?
- i. §63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
- j. §63.6605 What are my general requirements for complying with this subpart?
- k. §63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations?
- l. §63.6615 When must I conduct subsequent performance tests?
- m. §63.6620 What performance tests and other procedures must I use?
- n. §63.6625 What are my monitoring, installation, operation, and maintenance requirements?
- o. §63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
- p. §63.6635 How do I monitor and collect data to demonstrate continuous compliance?
- q. §63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
- r. §63.6645 What notifications must I submit and when?
- s. §63.6650 What reports must I submit and when?
- t. §63.6655 What records must I keep?
- u. §63.6660 In what form and how long must I keep my records?
- v. §63.6665 What parts of the General Provisions apply to me?
- w. §63.6670 Who implements and enforces this subpart?
- x. §63.6675 What definitions apply to this subpart?

9. The emergency diesel fire-water pump engine and the emergency generators, except for EU 4-3, do not have numerical emissions limits. As such, the only requirement for these units is to record hours of operation. Unit EU 4-3 is subject to emission limits under NSPS. In addition, the permittee shall record hours of operation for Unit EU 4-3. [OAC 252:100-8-6(a)(3)]

10. A serial number or another acceptable form of permanent (non-removable) identification shall be on auxiliary boiler, emergency generator engine, and fire-water pump engine. Maintain a picture of the permanent (non-removable) identification plate of each turbine. [OAC 252:100-43]

11. The permittee shall be authorized to operate the turbines continuously (24 hours per day, every day of the year). The auxiliary boiler, emergency diesel fire-water pump engine, and emergency generator shall be limited to 7,000, 500, and 500 hours per year, respectively.

[OAC 252:100-8-6(a)(3)]

12. The permittee shall incorporate the following BACT methods for reduction of emissions. Emission limitations are as stated in Specific Condition (S.C.) No. 1. [OAC 252:100-8-34]

- a. Emissions from each turbine shall be controlled by properly operated and maintained dry low-NO<sub>x</sub> combustors maintaining levels as specified in S.C. 1.
- b. Emissions from the auxiliary boiler shall be controlled by properly operated and maintained low-NO<sub>x</sub> burners maintaining levels as specified in S.C. 1.
- c. Emissions from each cooling tower shall be controlled by properly operated and maintained high efficiency drift eliminators controlling total liquid drift to 0.001% or less of the circulating water flow.

13. Each turbine is subject to the federal New Source Performance Standards (NSPS) for Stationary Gas Turbines, 40 CFR 60, Subpart GG, and shall comply with all applicable requirements. [40 CFR §60.330 to §60.335]

- a. §60.332: Standard for nitrogen oxides
- b. §60.333: Standard for sulfur dioxide
- c. §60.334: Monitoring of operations
- d. §60.335: Test methods and procedures
- e. Monitoring of the fuel sulfur content is not required if the permittee can demonstrate that the gaseous fuel meets the definition of "natural gas" with a maximum total sulfur content of less than 20 grains/100 SCF (680 ppmw or 338 ppmv) or less using either a current valid purchase contract, tariff sheet, or transportation contract or representative fuel sampling. Monitoring of fuel nitrogen content under NSPS Subpart GG shall not be required unless the permittee claims an allowance for fuel bound nitrogen.

14. The permittee shall comply with all acid rain control permitting requirements.

[40 CFR Parts 72, 73, 75]

15. Turbines #1 and #2 are subject to the Transport Rule (TR) Ozone Season NO<sub>x</sub> Trading Program. The permittee shall comply with all applicable requirements including but not limited to: [40 CFR §97.501 to §97.535]

- a. §97.501 Purpose.
- b. §97.502 Definitions.
- c. §97.503 Measurements, abbreviations, and acronyms.
- d. §97.504 Applicability.
- e. §97.505 Retired unit exemption.
- f. §97.506 Standard requirements.

- g. §97.507 Computation of time.
- h. §97.508 Administrative appeal procedures.
- i. §97.510 State NO<sub>x</sub> Ozone Season trading budgets, new unit set-asides, Indian country new unit set-aside, and variability limits.
- j. §97.511 Timing requirements for TR NO<sub>x</sub> Ozone Season allowance allocations.
- k. §97.512 TR NO<sub>x</sub> Ozone Season allowance allocations to new units.
- l. §97.513 Authorization of designated representative and alternate designated representative.
- m. §97.514 Responsibilities of designated representative and alternate designated representative.
- n. §97.515 Changing designated representative and alternate designated representative; changes in owners and operators; changes in units at the source.
- o. §97.516 Certificate of representation.
- p. §97.517 Objections concerning designated representative and alternate designated representative.
- q. §97.518 Delegation by designated representative and alternate designated representative.
- r. §97.520 Establishment of compliance accounts, assurance accounts, and general accounts.
- s. §97.521 Recordation of TR NO<sub>x</sub> Ozone Season allowance allocations and auction results.
- t. §97.522 Submission of TR NO<sub>x</sub> Ozone Season allowance transfers.
- u. §97.523 Recordation of TR NO<sub>x</sub> Ozone Season allowance transfers.
- v. §97.524 Compliance with TR NO<sub>x</sub> Ozone Season emissions limitation.
- w. §97.525 Compliance with TR NO<sub>x</sub> Ozone Season assurance provisions.
- x. §97.526 Banking.
- y. §97.527 Account error.
- z. §97.528 Administrator's action on submissions.
- aa. §97.530 General monitoring, recordkeeping, and reporting requirements.
- bb. §97.531 Initial monitoring system certification and recertification procedures.
- cc. §97.532 Monitoring system out-of-control periods.
- dd. §97.533 Notifications concerning monitoring.
- ee. §97.534 Recordkeeping and reporting.
- ff. §97.535 Petitions for alternatives to monitoring, recordkeeping, or reporting requirements.

16. The auxiliary boiler is subject to NSPS Subpart Dc. The only requirement is to maintain a cumulative record of monthly natural gas burned in this unit. [40 CFR 60 Subpart Dc]

17. The permittee shall operate a continuous monitoring system designed to sample NO<sub>x</sub> and either CO<sub>2</sub> or O<sub>2</sub> for compliance with 40 CFR 75. [40 CFR Parts 75]



18. The permittee shall conduct, at least once every eight calendar quarters, compliance testing of each of the turbines for emissions of CO. If a turbine is off-line (does not operate) in the eighth calendar quarter since the quarter of the previous CO test, the test shall be performed in the quarter in which the turbine recommences operation. Performance testing shall be conducted under representative conditions. [OAC 252:100-8-6(a)(3)(A)]

- a. The following USEPA methods shall be used for testing of emissions, unless otherwise approved by Air Quality:
  - (i) Method 1: Sample and Velocity Traverses for Stationary Sources.
  - (ii) Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rate.
  - (iii) Method 3: Gas Analysis for Carbon Dioxide, Excess Air, and Dry Molecular Weight.
  - (iv) Method 4: Determination of Moisture in Stack Gases.
  - (v) Method 10: Determination of Carbon Monoxide Emissions from Stationary Sources.
- b. Performance testing shall be conducted while the units are operating under representative conditions.
- c. Testing for CO may occur concurrently with RATA testing.
- d. A written testing protocol shall be submitted to the AQD for review and approval at least 30 days prior to the start of such testing. The protocol shall describe how the testing will be performed.
- e. A written report documenting the results of emissions testing shall be submitted within 60 days of completion of on-site testing.

19. When monitoring shows concentrations in excess of the ppm, lb/hr, or lb/MMBtu (LHV) limits of Specific Condition No. 1, the owner or operator shall comply with the provisions of OAC 252:100-9 for excess emissions. [OAC 252:100-9]

20. The following records shall be maintained on-site to verify Insignificant Activities. No recordkeeping is required for those operations that qualify as Trivial Activities.

[OAC 252:100-8-6 (a)(3)(B)]

- a. For fluid storage tanks with a capacity of less than 39,894 gallons and a true vapor pressure less than 1.5 psia: records of capacity of the tanks and contents.
- b. For activities that have the potential to emit less than 5 TPY (actual) of any criteria pollutant: the type of activity and the amount of emissions from that activity (annual).

21. The permittee shall maintain records as listed below. These records shall be maintained on site for at least five years after the date of recording and shall be provided to regulatory personnel upon request. [OAC 252:100-8-6(a)(3)(B)]

- a. CEMS data required by the Acid Rain program and the Transport Rule Ozone Season NO<sub>x</sub> trading program.
- b. NO<sub>x</sub> CEMS data demonstrating compliance with the 12-month rolling average.
- c. CO testing records in accordance with Specific Condition 18.
- d. Operating hours for the auxiliary boiler, emergency generator and emergency diesel fire-water pump engine (monthly and calendar year).
- e. Total fuel consumption, diesel and gas (monthly and calendar year).
- f. Demonstrate the gaseous fuel meets the definition of "natural gas" using one of the sources of information stated in 40 CFR 60.334 (h)(3).
- g. All occasions when any turbine operates for more than 4 hours outside the pre-mix mode.
- h. Records as required by 40 CFR Part 63, Subpart ZZZZ.
- i. Records as required by 40 CFR Part 60, Subpart JJJJ.
- j. Records as required by 40 CFR Part 60, Subpart GG.
- k. Records as required by 40 CFR Part 60, Subpart Dc.
- l. Records as required by 40 CFR Part 97, Subpart BBBB.

22. The permittee shall have the discretion of determining which records will be maintained in computerized form.

23. No later than 30 days after each annual anniversary date of the issuance of the original Title V operating permit (October 14, 2005), the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit. [OAC 252:100-8-6 (c)(5)(A) & (D)]

24. Permittee shall submit to Air Quality Division of DEQ an application for a modified operating permit no later than 180 days after commencement of operations for the new equipment authorized in this permit. The application shall include any changes from the construction permit application.

**MAJOR SOURCE AIR QUALITY PERMIT  
STANDARD CONDITIONS  
(June 21, 2016)**

**SECTION I. DUTY TO COMPLY**

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.

[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

**SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS**

A. Any exceedance resulting from an emergency and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV (Emergencies). [OAC 252:100-8-6(a)(3)(C)(iii)(I) & (II)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-8-6(a)(3)(C)(iv)]

C. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

**SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING**

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(c)(2)(B)]

B. Records of required monitoring shall include:

- (1) the date, place and time of sampling or measurement;
- (2) the date or dates analyses were performed;
- (3) the company or entity which performed the analyses;
- (4) the analytical techniques or methods used;
- (5) the results of such analyses; and
- (6) the operating conditions existing at the time of sampling or measurement.

[OAC 252:100-8-6(a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted report.

[OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting Of Deviations From Permit Terms) of these standard conditions.

[OAC 252:100-8-6(a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act.

[OAC 252:100-43]

F. Any Annual Certification of Compliance, Semi Annual Monitoring and Deviation Report, Excess Emission Report, and Annual Emission Inventory submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1), OAC 252:100-9-7(e), and OAC 252:100-5-2.1(f)]

G. Any owner or operator subject to the provisions of New Source Performance Standards ("NSPS") under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants ("NESHAPs") under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

H. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

I. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer's instructions and in accordance with a protocol meeting the requirements of the "AQD Portable Analyzer Guidance" document or an equivalent method approved by Air Quality.

[OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

J. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM<sub>10</sub>). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

K. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

#### SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit.

[OAC 252:100-8-6(c)(5)(A), and (D)]

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source.

[OAC 252:100-8-6(c)(5)(C)(i)-(v)]

C. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f) and OAC 252:100-8-6(c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based, except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.

[OAC 252:100-8-5(e)(8)(B) and OAC 252:100-8-6(c)(3)]

## **SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM**

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification.

[OAC 252:100-8-6(c)(6)]

## **SECTION VI. PERMIT SHIELD**

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit.

[OAC 252:100-8-6(d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are summarized in the Specific Conditions of this permit.

[OAC 252:100-8-6(d)(2)]

**SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT**

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.

[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

**SECTION VIII. TERM OF PERMIT**

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance. [OAC 252:100-8-6(a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration. [OAC 252:100-8-7.1(d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

**SECTION IX. SEVERABILITY**

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[OAC 252:100-8-6 (a)(6)]

**SECTION X. PROPERTY RIGHTS**

A. This permit does not convey any property rights of any sort, or any exclusive privilege. [OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued. [OAC 252:100-8-6(c)(6)]

**SECTION XI. DUTY TO PROVIDE INFORMATION**

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, revoking,

reissuing, terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.

[OAC 252:100-8-6(a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.

[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.

[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

## SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.

[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances:

[OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

- (1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
- (2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.
- (4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d).

[OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The notification should include any changes which may alter the status of a "grandfathered source," as defined under AQD rules. Such changes may require a permit modification.

[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]



E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6(c)(6)]

### SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(17) for confidential information submitted to or obtained by the DEQ under this section):

- (1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
- (2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (3) inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6(c)(2)]

### SECTION XIV. EMERGENCIES

A. Any exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken.

[OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (IV)]

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [OAC 252:100-8-6(a)(3)(C)(iii)(II)]

C. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that: [OAC 252:100-8-6 (e)(2)]

- (1) an emergency occurred and the permittee can identify the cause or causes of the emergency;
- (2) the permitted facility was at the time being properly operated;
- (3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6(e)(3)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

## **SECTION XV. RISK MANAGEMENT PLAN**

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6(a)(4)]

## **SECTION XVI. INSIGNIFICANT ACTIVITIES**

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I to OAC Title 252, Chapter 100, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or Federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list.

- (1) 5 tons per year of any one criteria pollutant.
- (2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.

[OAC 252:100-8-2 and OAC 252:100, Appendix I]

## **SECTION XVII. TRIVIAL ACTIVITIES**

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or Federal applicable requirement applies is not trivial even if included on the trivial activities list.

[OAC 252:100-8-2 and OAC 252:100, Appendix J]

## **SECTION XVIII. OPERATIONAL FLEXIBILITY**

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the

permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating. [OAC 252:100-8-6(a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

- (1) result in no net emissions increases,
- (2) are not modifications under any provision of Title I of the federal Clean Air Act, and
- (3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

## SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

- (1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter. [OAC 252:100-13]
- (2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]
- (3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]
  - (a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
  - (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
  - (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
  - (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.

- (4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
- (5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
- (6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]
- (7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

## SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances: [40 CFR 82, Subpart A]

- (1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;
- (2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and
- (3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant. [40 CFR 82, Subpart B]

C. The permittee shall comply with the following standards for recycling and emissions reduction except as provided for MVACs in Subpart B: [40 CFR 82, Subpart F]

- (1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156;
- (2) Equipment used during the maintenance, service, repair, or disposal of appliances must

- comply with the standards for recycling and recovery equipment pursuant to § 82.158;
- (3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161;
  - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166;
  - (5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158; and
  - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

## SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Source's Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in OAC 252:100-8-7.2(a) only if the following procedures are followed:

- (1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
- (2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).
- (3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).
- (4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R. § 70.8(a) and (c).
- (5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
- (6) The DEQ complies with 40 C.F.R. § 70.8(d).
- (7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).
- (8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
- (9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by DEQ

as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).

- (10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

## **SECTION XXII. CREDIBLE EVIDENCE**

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[OAC 252:100-43-6]